

2001 Market Monitor

Electric Restructuring

Division of Energy Resources

Commonwealth of Massachusetts

Office of Consumer Affairs and Business Regulation

Introduction

In 1997 Massachusetts became one of the first states in the nation to restructure its electric industry. The goal was to use competitive market forces to reduce prices and provide customers with choice of their retail electricity supplier. The year 2001 marked the fourth year of restructuring. While progress has been made on several fronts, issues and challenges remain. For example, the lack of a market-based price for Standard Offer rates hindered the development of competitive markets. Several market initiatives need to be implemented to overcome market barriers and alleviate problems preventing a more competitive, robust retail market. In this report, the Division of Energy Resources (DOER) outlines the highlights and significant events of 2001.

Highlights

- ❖ *Customers continued to save money despite increases in Standard Offer and Default Service rates.*
- ❖ *Massachusetts electric prices remain competitive with other New England States.*
- ❖ *Number of competitive customers reached its highest level since Restructuring started.*
- ❖ *Overall reliability of electric system improved, but summer outages highlight distribution issues.*

Table 1: Post-Restructuring Savings 1998-2001
(millions of \$)

	Residential	Commercial	Industrial	Other	All Customers
Mar-Dec 98	142	160	65	9	376
Jan-Dec 99	210	236	91	12	549
Jan-Dec 00	286	358	106	9	759
Jan-Dec 01	40	17	-31	5	31
Total Savings	678	771	231	35	1715

Source: DOER, 1998-2000 Market Monitors, EIA, BLS

The Electric Restructuring Act (the Act) mandates that DOER monitor the changes in the electric industry each year. As prescribed by the Legislature, DOER reports on electricity prices and price disparities, competitive market developments, and electric system reliability (M.G.L. c 25A §§ 7, 11D, 11E). Below are the major findings for calendar year 2001.

Customers Continued to Save Money through Restructuring Despite Increases in Standard Offer and Default Service

Rates Rise

One of the primary goals of the Act is to save customers money. Despite increases in standard offer and default service prices, the majority of consumers in Massachusetts still saved money in 2001 compared to pre-restructuring prices (adjusted for inflation). These savings resulted from the continued application of the mandated rate reductions for standard offer customers, and the migration of some customers to the competitive market for better prices than available through their utility. Nevertheless, these savings did not materialize for all consumer groups. Notably, large industrial customers, who are most susceptible to changes in generation costs because of the larger portion of the bill these costs represent, suffered a loss of savings relative to pre-restructuring prices (see Table 1). The reduction in savings for 2001 was primarily due to increases in fuel costs during the year. This was manifested in two ways affecting the energy portion of customer bills: 1) Standard Offer was administratively increased by fuel cost adjustments approved by the Department of Telecommunications and Energy (DTE), and 2) beginning in December 2000, default service prices were determined by a market-based bidding process.

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Standard Offer Affected by Fuel Adjustments

While Standard Offer prices were fixed by contracts of wholesale suppliers, these contracts also provided the suppliers with the ability to recover extraordinary increases in fuel costs. These contracts allowed the suppliers to receive compensation for high fuel costs when the combined prices of oil and gas prices reached a specified trigger point for the given calendar year. The trigger point, which was \$5.35 per MMBtu for both 2000 and 2001, was reached in April of 2000. In 2001 the trigger point was \$6.09. The Standard Offer Service Fuel Adjustment (“SOSFA”)¹ allows the companies to increase Standard Offer Rates for these increased fuel costs.

Because the fuel adjustments are based on updated twelve-month averages, high fuel prices in past years are reflected in current Standard Offer prices. Regulatory delay in the charging of customers for fuel cost increases results in a discrepancy between market prices and customer costs. This has caused consistent dissonance between standard offer prices and the wholesale electricity costs paid by retail licensed competitive suppliers (suppliers), making it difficult for suppliers to enter the retail market. Table 2 illustrates the rate increases during 2001.

Table 2: Price per kWh for Massachusetts Electric Companies, 2001 vs. 2000
(cents/kWh)

	2001 Average Price	2000 Average Price	% Change
Nantucket Electric	14.5	13.3	8.6%
Commonwealth Electric	13.7	11.0	24.1%
Fitchburg Gas & Electric	13.7	10.9	26.0%
Boston Edison	12.4	9.8	26.0%
Massachusetts Electric*	11.0	9.8*	11.9%
Western Massachusetts Electric	11.0	9.5	15.1%
Cambridge Electric	10.3	6.5	60.1%
Total: Distribution Company	11.7	9.8	19.4%
Total: Municipal Company	9.9	9.0	9.1%
Total of Entire State	11.3	9.7	18.0%

Source: FERC Form 1, Distribution Companies, DOER

*Massachusetts Electric data for 2000 adjusted based on more recent data from the company

¹ This was implemented by a letter order issued by DTE on December 4, 2000.

Default Service Rates Now Reflect Market-based Costs

Beginning in December of 2000, Default Service rates were decoupled from Standard Offer Service rates to allow default service prices to reflect market-based costs. As part of the decoupling, customers can choose between a six-month fixed price option and a monthly variable price option. Additionally, distribution companies solicit default service generation proposals with separate bids for three customer groups: 1) residential, 2) commercial, and 3) industrial. All residential and small C&I customers were initially put onto fixed rates and had the option to change to a variable rate. Very few of these customers switched from their original rates. Conversely, all large C&I customers were initially put onto the variable rate and had the option to switch to the fixed rate. Few of these customers decided to switch to the fixed rate. However, a majority of the C&I customers that did switch to the fixed rate option were among the largest users of electricity in this customer class.

Massachusetts Electricity Prices Remain Competitive with Other New England States

Despite the aforementioned rise in rates, Massachusetts' prices remained competitive with those of the other New England states. The average price for electricity in Massachusetts during 2001 was 11.1 cents/kWh. During 2001, the average overall electricity price in Massachusetts rose 16.8%. Figure 1 illustrates the average electricity prices for each New England State.²

The Massachusetts Retail Competitive Market Showed Modest Progress in 2001

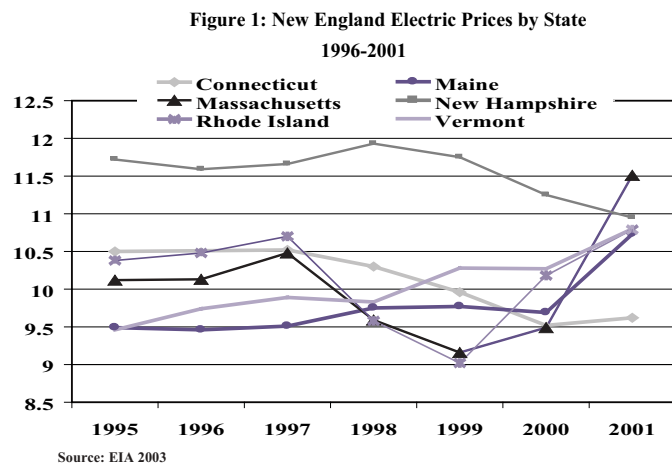
Changes in the wholesale market price and other factors made it harder for competitive suppliers to continue offering products. In the first six months of 2001, Utility.com and Essential.com withdrew their product offerings to the residential market. This left residential and small business customers with no electricity choices.

In the commercial and industrial market, customers left competitive suppliers to return to the lower-priced default service.³ Default Service rates established by six-month procurements were more attractive than market offerings. For Standard Offer customers, there were fewer suppliers able to beat the Standard Offer prices.

Number of Competitive Supply Customers Reached its Highest Level Since Restructuring Began

The total number of competitive supply customers reached its highest level since restructuring in December 2001 (15,758). This number exceeded the previous high set in January 2000 (9,471). The number of competitive supply customers fluctuated throughout the year: 5,584 in January, declining steadily to a low of 2,929 customers in July, and then increasing dramatically to 15,758 in December. These customers consumed 5 percent of total sales in January, increasing to 14.33 percent by December.

There was a steady decline in the number of standard offer service customers during 2001. At the same time, the number of default service customers grew, and the number of competitive supply customers increased. The vast majority of customers switching to competitive supply were large commercial and industrial customers.



² The 2001 data in this figure and subsequent figures in this chapter were taken from preliminary data from the EIA. Hence, these data may be updated at a later date and may be different from the data collected and analyzed by DOER.

³ When a customer leaves standard offer service to enroll in a product offered by a competitive supplier they cannot return to standard offer service.

Table 3 shows statewide totals of the number and percentage of customers on standard offer, default service and competitive supply for distribution companies. Table 3 also displays the electricity sales of the sectors (in kW hours and percentage). Figure 2 presents a graphic representation of the electricity sales for large commercial customers in the state.

Default Service Customers and Consumption Grew Substantially

On October 23, 2001, the Cape Light Compact (“the Compact”) received approval from the DTE to provide electric power supply to approximately 42,000 default service customers within its twenty-one member communities, through its Default Service Pilot Project (hereinafter “the Pilot”).⁴ Although medium and large commercial and industrial default service customers had, and continue to have, opportunities for competitive service, there were few, if any, opportunities available for small business and residential default service customers. The Compact sought to overcome this hurdle by aggregating the load of default service customers in its member communities, thus making competitive service more appealing to suppliers and providing some members with electric choice and savings.

Large C&I Market Still Outpaces Small C&I and Residential

In 2001 the large C&I customer migration data best illustrates the “boom and bust” nature of the Massachusetts market. This migration highlights the difference between the regulated services and the wholesale costs paid by competitive suppliers. During the year, the amount of electricity bought by large C&I customers from competitive suppliers went from 3.3% in January to 1.3% in July (when fuel costs paid by suppliers were rising but the regulated service prices paid by customers remained low) and then increased to 16.7% in December (when the SOSFA resulted in increased standard offer prices, default service procurements reflected an overly pessimistic outlook of costs, yet actual fuel costs were unexpectedly dropping).

The small commercial and residential customers market showed the same pattern, but much less penetration by competitive suppliers. During the year, the amount of electricity bought by small C&I customers from competitive suppliers went from 0.6% in January to 0.4% in July and then increased to 3.4% in December.

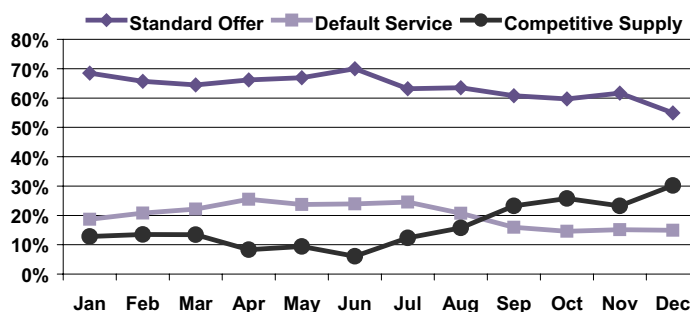
The residential market made less progress with migration to competitive service. During the year, the amount of electricity bought by residential customers from competitive suppliers went from 0.2% in January to 0.1% in July and then increased back to 0.2% in December. That the residential non-low-income market for competitively supplied electricity remained at less than 1% is unsatisfactory as an outcome of restructuring.

Table 3: Distribution Company Customers (kWh & percentage)

Customer Class	January 2001		December 2001	
	Total Customers	Total kWh Sales	Total Customers	Total kWh Sales
Standard Offer	1,867,369 (71.52%)	3,202,494,689 (65.15%)	1,806,163 (67.90%)	2,469,206,675 (60.77%)
Default Service	642,677 (27.68%)	879,913,415 (19.41%)	687,767 (28.65%)	647,989,475 (18.10%)
Competitive Supply	5,584 (.081%)	218,704,811 (14.44%)	15,758 (3.45%)	521,257,228 (21.14%)
Total	2,215,830 (100%)	4,301,112,915 (100%)	2,509,688 (100%)	3,638,453,638 (100%)

Source: DOER 2001 Customer Migration Numbers

Figure 2: Migration for Large C&I Customers in 2001



Source: DOER 2001 Customer Migration Numbers

⁴ D.T.E. Order 01-63 approves the non-price terms of the Compact’s proposal; and the contract terms with a competitive supplier.

The slow growth in competitive markets for mass markets (residential and small business customers) was cause for attention from House Speaker Thomas Finneran and Representative Daniel Bosley. On October 11, 2001, Speaker Finneran and Representative Bosley held the first of what would become a series of “cracker barrels” inviting input from numerous stakeholders to review the level of progress achieved since the passage of the Restructuring Act and to consider possible reforms.

Price Disparity Remained Generally Unchanged from 2000

In 2001, average electricity retail prices increased more than inflation due to a combination of factors. These increases were primarily due to increases in the generation rates. As previously mentioned, standard offer rates rose due to both a regulated step increase and the implementation of fuel surcharges. Default service rates, decoupled from standard offer rates at the end of 2000, were allowed to be market based. Market conditions dictated higher default service rates in 2001. Neither the fuel surcharge increases, nor the default service increases were covered by the rate reduction mandated by the 1997 Restructuring Act.

Price Disparity by Customer Group Decreased Among Local Distribution Companies

Table 4 breaks down price data for the Local Distribution Companies (LDCs) according to customer group. Generally, larger customers suffered larger percentage increases in price levels, primarily due to generation costs representing a higher portion of their bills⁵.

A comparison of 2001 with 2000 shows that overall price disparity actually fell from 3.8 cents to 2.7 cents.⁶ Only residential customers featured increases in price disparity among LDCs, but these levels still remained low relative to overall price levels for this customer group.

Table 4: 2001 and 2000 Price Levels for Distribution Companies
(cents/kWh)

	Residential			Commercial			Industrial		
	2001	2000	Change	2001	2000	Change	2001	2000	Change
Boston Edison	14.4	11.7	23.0%	11.6	9.1	27.7%	11.0	8.6	27.6%
Cambridge Electric	13.7	9.5	44.0%	9.8	6.0	64.5%	9.3	5.5	69.9%
Commonwealth Electric	15.1	12.4	21.5%	12.7	10.0	27.3%	10.8	8.5	26.7%
Fitchburg Gas & Electric	14.5	12.2	19.3%	14.4	11.9	21.1%	12.2	9.2	32.9%
Massachusetts Electric	11.5	10.4	10.7%	10.8	9.7	12.1%	10.0	8.8	13.5%
Nantucket Electric	14.7	13.1	12.4%	14.0	13.7	2.4%	15.0	15.3	-1.6%
Western Massachusetts Electric	12.6	10.8	17.0%	10.5	9.3	13.9%	8.9	7.9	12.6%

Source: FERC Form 1

Municipal Rates Remain Lower than Distribution Company Rates

As discussed in previous Market Monitors⁷, municipal utilities have traditionally had lower prices for residential customers relative to Investor Owned Utilities (IOUs), which is not surprising given the influence of this customer group on local municipal utility operations. For 2001, however; this price advantage was observed for all customer groups. Possible explanations for this advantage include use of long-term contracts by municipals and lack of or use of a different fuel price mechanism. Nevertheless, the data still show the impacts of fuel price increases on municipal electricity prices.

⁵ Western Massachusetts Electric Company is a notable exception due to differences in their contracting of standard offer service, notably the lack of a fuel surcharge.

⁶ Applying the F-Test to the unweighted 2000 and 2001 data yielded the following probabilities that price disparity did not change: 93% for Residential, 46% for Commercial, and 84% for Industrial. Thus, it appears that price disparity did change (decreased) at a statistically significant level for commercial customers.

⁷ DOER Market Monitors, 1998-2000.

Overall Reliability of Electric System Improved, But Summer Outages Highlighted Distribution Issues

Maintaining the electric system reliability and improving the electric distribution performance are underlying goals of the Restructuring Act. In 2001, the electric industry and state government continued to monitor, protect and enhance electric reliability. Below is a description of the capacity and demand of the wholesale market and some developments that are anticipated to have an impact on the frequency of outages experienced by customers.

Recent New Generation Availability Helps Maintain Electric System Reliability.

During the summer 2001, New England experienced repeated record-breaking demand for electric power. This was due to severe and prolonged heat and humidity in combination with violent and prolonged thunderstorms. The highest peak load of 24,967 MWs was established on August 9. This load was approximately 2,500 MW higher than the previous record and exceeded the forecasted summer 2001 peak load by nearly 2,000 MW, or almost 10 percent.

With the record demand, the Independent System Operator of New England (ISO-NE), which operates the region's electricity grid, activated Operating Procedure No. 4 (OP 4) measures six times. This was the same number of times as in the previous year and down from 11 times during 1999. OP4 consists of a series of steps designed to increase supply and reduce demand, among them, public appeals by state officials for citizens to reduce electricity use.

In addition to OP4, two other factors helped New England meet the peak loads during August. First, about 3,500 MWs in additional generation had come on-line between May 1999 and summer 2001⁸. This generation enhanced reserve margins. Also, during the August heatwave, there were only about 1700 MWs of generation out due to forced outages and reductions. Proposed generator additions and few expected unit retirements will provide even greater capacity margins in New England.

Despite the overall success of the electricity grid in meeting demand, the conditions noted above strenuously tested local electric distribution systems in ways not seen in recent decades. As a result, Massachusetts residents in numerous cities and towns experienced power outages. The DTE and ISO-NE investigated the causes of these outages and ordered several steps to be taken to try and prevent future outages.

Prior to the August outages, in June 2001, the DTE issued Final Service Quality Guidelines establishing performance benchmarks for customer service and billing, customer satisfaction, staffing levels, reliability and safety, and requiring ongoing data collection and assessments by the companies. The Final Guidelines also established the level and quality of data necessary to allow each company to calculate its specific benchmarks for service quality, along with revenue penalties. While the DTE had directed specific service quality plans for some companies within the context of mergers, the June 2001 Order imposed the following: (1) on all companies without an existing service quality plan, the requirement to file a proposed plan as part of any petition for a general rate increase and (2) on all companies with existing service quality plans, the requirement to file a new service quality plan comporting with the Final Guidelines, by October 27, 2001.

On September 14, 2001, the ISO-NE released a report on the system operations and market performance during summer peaks in 2001.⁹ The report concluded that generation resources performed as required through that summer peak, however, the transmission system was pushed to the limit. Specifically, ISO-NE found that several hundred MWs of critically needed capacity in northern New England and eastern Canadian Provinces were locked in by transmission constraints in northern New England.

⁸ May 1999 was when the new competitive wholesale market rules began. The source of information for the added generation capacity (3500 MWs) was ISO-NE.

⁹ "ISO-NE Report Phase I on System Operations and Market Performance for the Summer Peak Periods of 2001," ISO-NE. Sept., 2001.

ISO-NE intends to illustrate the urgency of moving ahead with critically needed transmission, generation, and demand-side management alternatives in New England.

Renewable Energy Development Moved Forward

Another goal of the Act was to encourage the development of renewable energy through several mechanisms. In 2001, DOER began the public review process for the Renewable Portfolio Standard (RPS), holding public hearings in Springfield and Boston during October. The agency continued to receive written comments into November and began its response to public comments in December. The Restructuring Act directs DOER to establish a RPS for all retail electricity suppliers selling electricity to end-use consumers in Massachusetts. Beginning in 2003, each supplier must obtain at least one percent of its supply from qualified new renewable generation units. Each year thereafter, the standard increases by one-half percent (0.5%) through 2009 when it reaches four percent of each supplier's sales in that year. After 2009, the standard may increase by one percent per year until DOER modifies or suspends the requirement.

Conclusion

2001 marked another year in the development of the competitive electricity market. For the first time, standard offer and default service prices were allowed to adjust for increases in fuel prices and other market forces. As a result, prices increased significantly and savings to customers were reduced. Nevertheless, customers continued to enjoy savings relative to the prices they paid prior to restructuring. As default service and standard offer prices continue to reflect market behavior, we anticipate that the number of competitive offerings to customers will continue to increase. Indeed, the number of competitive supply customers reached its highest level since the beginning of restructuring. Unfortunately, the mass market continues to see limited opportunities, unlike larger commercial and industrial customers. DOER will continue to track the development of the mass market and the prices paid by all customers.

Massachusetts and New England continued to enjoy reliable wholesale electricity power. Despite record-breaking demand for electric power in the Summer of 2001, the regional electric grid maintained needed reliability levels. Turning to the distribution or retail reliability side, the DTE finalized their service-quality guidelines in order to monitor distribution system reliability. DOER will include an analysis of distribution-system reliability in future reports.

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